

Mill Road crossing of Quincosin Swamp would be replaced with a culvert (9- by 6-foot). The proposed project would require one new crossing of Quincosin Swamp (9- by 6-foot culvert) to accommodate the ramp in the northwest quadrant of US 70 and Davis Mill Road.

Approximately 22 acres of right-of-way and 0.2 acre of construction easement would be needed to accommodate the interchange improvements and service roads.

3.3 Median Closures

Closing the median openings would generally involve the removal of existing pavement, including left-turn lanes. The existing grassed median would be extended. At the US 70 intersection with Creech's Mill Road-Peedin Road, the median would be a raised concrete island with a flexible delineator system. However, if vehicles traveling illegally across the median becomes an issue, this emergency access could be re-evaluated for potential elimination as a separate action.

3.4 Roadway Design Criteria

The roadway design criteria utilized during the development of the preliminary alternatives is presented in Table 4. Design criteria for the proposed preliminary alternatives meet the NCDOT and American Association of State Highway and Transportation Officials (AASHTO) standards. Design criteria is shown in Table 4.

Table 4. Design Criteria

Criteria	US 70	US 70 Business-Peedin Street Extension	Stevens Chapel Road-Davis Mill Road	Ramps
Classification	Rural Principal Arterial	Rural Minor Arterial	Rural Minor Arterial	Rural Principal Arterial
Type of Terrain	Level	Level	Level	Level
Design Speed	60 mph	50 mph	50 mph	35 mph to 60 mph
Posted Speed	55 mph	45 mph	45 mph	30 mph to 55 mph
Proposed R/W Width	250'	Varies	Varies	Varies
Control of Access	Limited	No	No	Yes
Typical Section Type	4-Lane Divided	Multi-lane	2-Lane	1-Lane
Lane Width	12'	12'	12'	14'
Sidewalks	No	No	No	No
Bicycle Lanes	No	No	No	No
Median Width	50'	n/a	n/a	n/a
Maximum Grade	3 %	4 %*	6 %	5 %
Minimum Grade	0.3 %	0.3 %	0.3 %	0.3 %

*Potential design exception

3.5 Cost

Total project cost is estimated to be \$22,974,902, including \$17,000,000 for construction, \$5,547,138 for right-of-way, and \$427,764 for utilities.